



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,050	07/18/2003	Michael John Davis	125436-2	6669

266 7590 10/20/2006

MUELLER AND SMITH, LPA  
MUELLER-SMITH BUILDING  
7700 RIVERS EDGE DRIVE  
COLUMBUS, OH 43235

EXAMINER

AHMED, SHEEBA

ART UNIT PAPER NUMBER

1773

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/623,050

Applicant(s)

DAVIS ET AL.

Examiner

Sheeba Ahmed

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-13, 33, 36-38, 42 and 74 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-13, 33, 36-38, 42, and 74 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendments***

1. In the amendments submitted on July 25, 2006, each amended claim has not been provided with the proper status identifier. The status of each claim must be indicated after its claim number by using a proper status identifier. In this case, "amended" is not a correct status identifier and should be replaced with "currently amended". Amendments to claims 2-13, 33, and 42 have been entered however **a new listing of claims with the proper status identifiers is required in response to this Office Action**. Claims 1, 14-32, 34-35, 39-41, and 43-73 have been cancelled. New claim 74 has been added.

**Claims 2-13, 33, 36-38, 42, and 74 are now pending and under consideration.**

### ***Claim Objections***

2. Claim 33 is objected to because of the following informalities:

The term "unreinforced" should be "unreinforced".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1773

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2-13, 33, 36-38, 42, and 74 are rejected under 35 U.S.C. 102(b) as being anticipated by Yeager et al. (WO 01/40354 A1).

Yeager et al. disclose a resin composition comprising (1) a poly(phenylene ether) compound in which at least a portion of the hydroxyl groups have been reacted with a compound containing ethylenic unsaturation and (2) curable unsaturated monomers. The PPE preferably has a number average molecular weight of less than 10,000 (page 6, lines 18-32). The composition further optionally contains a polymerization catalyst, a flame-retardant and a fibrous reinforcement and the composition may be used to impregnate fibrous reinforcement clad with copper to form electrical circuit boards (Page 7, lines 6-13). Preferred PPE compounds are given on Pages 8-11 and correspond to the recited structures in claims 12 and 13 of the instant application. Component (2) of the resin composition includes monofunctional acrylate and monofunctional styrene compounds (Page 11, lines 20-22). The resin composition may further contain unsaturated polymers such thermoplastic elastomers or thermoplastic block polymers such as styrene (Page 13, lines 19-22). All limitations of claims 12-13, 33, 36-38, 42, and 74 are disclosed in the above reference.

#### ***Response to Arguments***

4. Applicant's arguments filed on July 25, 2006 have been fully considered but they are not persuasive. Applicants traverse the rejection of claims 2-13, 33,

Art Unit: 1773

36-38, 42, and 74 under 35 U.S.C. 102(b) as being anticipated by Yeager et al. (WO 01/40354 A1) and submit that Yeager specifically teaches conventional copper clad boards where prepegs are used to form the boards and that prepegs are reinforced with glass mats which are impregnated with the Yeager composition and that the present invention, in contradistinction, expressly excludes reinforcement. However, the Examiner would like to point out that Yeager specifically states that the composition *optionally* contains a fibrous reinforcement and the composition may be used to impregnate fibrous reinforcement clad with copper to form electrical circuit boards hence the ***reinforcement is not a requirement of Yeager's invention.*** Yeager specifically meets all the limitations of the instantly claimed invention and the rejection is maintained.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

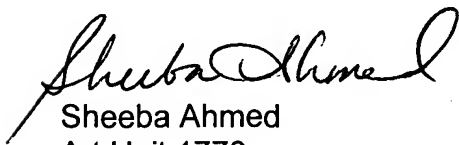
Art Unit: 1773

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheeba Ahmed whose telephone number is (571)272-1504. The examiner can normally be reached on Mondays and Thursdays from 9:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.



Sheeba Ahmed  
Art Unit 1773  
October 16, 2006